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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,056	02/27/2004	Chun-Wei Lin	CU-3617	9164

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EXAMINER

GOFMAN, ANNA

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 04/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/789,056	Applicant(s) LIN, CHUN-WEI	
	Examiner Anna Gofman	Art Unit 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 9-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

1. Claims 9-16 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on March 09, 2006.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saitoh et al. (US 4,332,858) in view of Warrach (US 3,919,035).

Saitoh et al. teach a multi-layer laminate comprising at least one A-B double layer structure. The multi-layer laminate may have three or more layers, a layer or layers other than the double layer must be materials which can adhere to layer A or layer B. Particularly B has good adhesion to various materials so it can be useful as an adhesive layer when combined with other materials to give a laminate of A-B-C three layers (col.5 lines 38-44). Layer B is composed mainly of the modified block copolymer comprising at least one material selected from the group consisting of acrylate polymers or monomers, polyurethane. The modified block copolymer contained in B has excellent

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adhesion to layer A. Grafting an unsaturated carboxylic acid on a styrene-butadiene copolymer is effective as an adhesive layer (col.4 lines 3-48). Layer A can be made from materials such as wood, woven fabrics, non-woven fabrics, and the like (col.5 lines 58-59). Layer B of Saitoh et al. is equivalent to the binder layer, as recited in claim 1. Saitoh et al. additionally teach that the block copolymer solution is of a low viscosity (col.7 line 4).

Saitoh et al. teach a low viscosity composition. In the alternative, Saitoh et al. do not explicitly teach the claimed viscosity. However, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to optimize the viscosity, since Applicant teaches in the specification that the composition of the present invention is a low viscosity, because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

Saitoh et al. fail to teach the intermediate layer recited in claim 1, comprising an SBS block copolymer, a solvent, and a plasticizer. Warrach is drawn to methods of bonding styrene-butadiene block copolymers to other surfaces. Warrach teaches coating the surface of the styrene-butadiene block copolymer composition with a solvent and applying an adhesive to both surfaces (Abstract). The solvent can be aromatic hydrocarbons such as toluene (col.2 lines 56-58). It would have been obvious to one having ordinary skill in the art at the time the invention was made to add the layer comprising SBS block copolymer and solvent as an intermediate layer in the invention of Saitoh et al., motivated to enhance adhesion, as taught by Warrach. Moreover, it is the Examiner's position that the addition of plasticizers are conventional in forming

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polymer compositions and would have been obvious to one having ordinary skill in the art at the time the invention was made to add a plasticizer to the composition of Warrach, motivated to produce smoothness and softness, in the invention of Saitoh et al. Thus, claims 1 and 3-6 are rejected.

4. Claims 1-2 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saitoh et al. in view of Warrach, further in view of Tan et al. (US 4,251,642).

The features of Saitoh et al. have been set forth above. Saitoh et al. teach layer A, comprising an acrylate monomer and polyurethane but fail to disclose and SBS block copolymer grafted with an acrylate monomer, and polyurethane blended with an SBS grafted block copolymer, further comprising a lubricant and matting agent, as recited in claim 1 to be the surface modifying layer. Tan et al. are drawn to compatible polyurethane blends and teach that a block copolymer of styrene-butadiene can be blended with polyurethane (Abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to blend the polyurethane with the SBS grafted block copolymer to the polyurethane and acrylate monomer layer of Saitoh et al., motivated by the teaching of Tan et al. that adding and SBS grafted block copolymer to polyurethane is a more compatible blend than polyurethane alone, in the invention of Saitoh et al. Further, it is the Examiner's position that the use of lubricants and matting agents are conventional in forming polymer compositions. Therefore, it would be obvious to one having ordinary skill in the art to add a lubricant and a matting agent to the blend of the SBS grafted block copolymer, polyurethane and

acrylate monomer, motivated to enhance smoothness as well as provide delustering characteristics. Therefore, claims 1-2 and 8 are rejected.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saitoh et al. in view of Warrach, further in view of Tan et al., and further in view of Costemalle et al. (US 5,333,662).

The features of Saitoh et al. have been set forth above. Saitoh teach adding a plasticizer to layer B but are silent about the plasticizer belonging to the intermediate layer, as taught by Warrach. Both are silent about a plasticizer being a paraffinic oil or a naphthenic oil. Costemalle et al. are drawn to tire innerliner compositions comprising plasticizers and teach that suitable plasticizers can be paraffinic or naphthenic oils (col.6 lines 54-56). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the plasticizers be paraffinic or naphthenic oils, as taught by Costemalle et al. motivated to attain lubrication and smoothness, in the invention of Saitoh et al. Therefore, claim 3 is rejected.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In addition to the references provided by Applicant, the follow documents are considered pertinent to Applicant's invention:

Harlan, Jr. (US 4,007,311) teaches polyacrylate-grafted block copolymer adhesive compositions but fails to teach a plasticizer or solvent or the copolymer.

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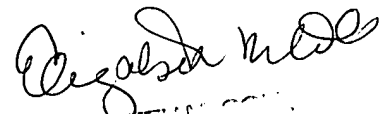
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anna Gofman whose telephone number is (571) 272-7419. The examiner can normally be reached on Mon.-Fri. 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Anna Gofman
Examiner
Art Unit 1771

AG


ELIZABETH MORRIS
Patent Examiner